

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Canceled).

Claim 2 (Currently Amended): ~~Modulation~~ A modulation identification device according to claim 1, characterized by having a first input for a modulated RF signal to be identified, a second input for a second RF signal having a frequency essentially corresponding to a carrier frequency of the modulated RF signal and at least one output for a flag indicating a modulation identified, wherein the device comprises:

a n-port junction, n being an integer equal to or larger than three, being supplied with the modulated RF signal and the second RF signal and outputting at least one third RF signal to at least one power detector;

a signal processing unit for processing an output of the power detector to generate the at least one flag; and

a unit for averaging at least one branch of the output of the power detector over a predetermined number of symbols before ~~it~~ the output of the power detector is supplied to the signal processing unit.

Claim 3 (Currently Amended): ~~Modulation~~ The modulation identification device according to claim 1, ~~characterized in that~~ wherein the signal processing unit comprises at least one comparison unit for comparing a processed output of the at least one power detector with at least one predetermined threshold.

Claim 4 (Currently Amended): ~~Modulation~~ A modulation identification device according to claim 3, ~~characterized in that~~ having a first input for a modulated RF signal to be

identified, a second input for a second RF signal having a frequency essentially corresponding to a carrier frequency of the modulated RF signal and at least one output for a flag indicating a modulation identified, wherein the device comprises:

a n-port junction, n being an integer equal to or larger than three, being supplied with the modulated RF signal and the second RF signal and outputting at least one third RF signal to at least one power detector; and

a signal processing unit for processing the output of the power detector to generate the at least one flag, wherein

the signal processing unit comprises at least one comparison unit for comparing a processed output of the at least one power detector with at least one predetermined threshold, and

the at least one predetermined threshold is calculated on ~~the a~~ basis of at least one relative power ratio, the relative power ratio being ~~the a~~ ratio of ~~the a~~ current processed output of the at least one power detector and an average processed output of the at least one power detector.

Claim 5 (Currently Amended): ~~Modulation~~ A modulation identification device ~~according to claim 3, characterized in that~~ having a first input for a modulated RF signal to be identified, a second input for a second RF signal having a frequency essentially corresponding to a carrier frequency of the modulated RF signal and at least one output for a flag indicating a modulation identified, wherein the device comprises:

a n-port junction, n being an integer equal to or larger than three, being supplied with the modulated RF signal and the second RF signal and outputting at least one third RF signal to at least one power detector; and

a signal processing unit for processing an output of the power detector to generate the at least one flag, wherein

the signal processing unit comprises at least one comparison unit for comparing a processed output of the at least one power detector with at least one predetermined threshold,
and

the signal processing unit comprises at least one counter for counting ~~the~~ a number (n_{hit}) of hits for which the processed output of the at least one power detector satisfies at least one predetermined comparison condition, the at least one predetermined comparison condition being based on the at least one predetermined threshold.

Claim 6 (Currently Amended): ~~Modulation~~ The modulation identification device according to claim 5, ~~characterized in that wherein~~ the signal processing unit comprises a calculation unit for calculating a probability for ~~each a~~ a modulation ~~type~~ to be identified on ~~the~~ a basis of the number of hits.

Claim 7 (Currently Amended): ~~Modulation~~ The modulation identification device according to claim 6, ~~characterized in that wherein~~ the signal processing unit is ~~designed~~ configured to output a flag for an identified modulation ~~type~~ in case ~~the~~ a corresponding calculated probability exceeds a predetermined probability threshold.

Claim 8 (Currently Amended): ~~Modulation~~ The modulation identification device according to claim 1, ~~characterized in that~~ 2, wherein the signal processing unit is provided with an input for a-priori information on ~~the~~ a symbol duration of the modulated RF signal.

Claim 9 (Currently Amended): ~~Software~~ A software defined radio device,
~~characterized in that it comprises~~ comprising a modulation identification device according to
claim [[1]] 2.

Claim 10 (Canceled).

Claim 11 (Currently Amended): ~~Method according to claim 10, characterized in that~~
A method for identifying a modulation of a wirelessly transmitted modulated RF signal, the
method comprising the following steps:

supplying the modulated RF signal and a second RF signal having a frequency
essentially corresponding to a carrier frequency of the modulated RF signal respectively to an
input of a n-port junction outputting at least one output RF signal, n being an integer larger
than three; and

signal processing the at least one output RF signal of the n-port junction to generate at
least one flag indicating the identified modulation of the modulated RF signal, wherein

at least one branch of the output of the n-port junction is averaged over a
predetermined number of symbols.

Claim 12 (Currently Amended): ~~Method~~ The method according to claim 10,
~~characterized in that 11, wherein the step of~~ signal processing comprises ~~the step of~~
comparing a processed output of the n-port junction with at least one predetermined
threshold.

Claim 13 (Currently Amended): ~~Method according to claim 12, characterized in that~~
A method for identifying a modulation of a wirelessly transmitted modulated RF signal, the
method comprising:

supplying the modulated RF signal and a second RF signal having a frequency
essentially corresponding to a carrier frequency of the modulated RF signal respectively to an
input of a n-port junction outputting at least one output RF signal, n being an integer larger
than three; and

signal processing the at least one output RF signal of the n-port junction to generate at
least one flag indicating the identified modulation of the modulated RF signal, wherein

the signal processing comprises comparing a processed output of the n-port junction
with at least one predetermined threshold, and

~~the step of~~signal processing furthermore comprises ~~the step of~~counting ~~the a~~ number
of hits for which the processed output of the n-port junction satisfies at least one
predetermined comparison condition.

Claim 14 (Currently Amended): ~~Method~~The method according to claim 13,
~~characterized in that~~wherein the ~~step of~~signal processing ~~furthermore~~further comprises the
~~step of~~calculating a probability for ~~each a~~ modulation ~~type~~to be identified on the basis of the
number of hits.

Claim 15 (Currently Amended): ~~Method~~The method according to claim 14,
~~characterized in that~~wherein the ~~step of~~signal processing ~~furthermore~~further comprises the
~~step of~~outputting a flag for ~~a an~~ identified modulation ~~type~~in case ~~the a~~ corresponding
calculated probability exceeds a predetermined probability threshold.

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Claim 16 (Canceled).